IEPA Log No.: **C-0496-16**
CoE appl. #: **LRC-2016-00784**

Public Notice Beginning Date: **June 21, 2017**
Public Notice Ending Date: **July 12, 2017**

Section 401 of the Federal Water Pollution Control Act
Amendments of 1972

Section 401 Water Quality Certification to Discharge into Waters of the State

Public Notice/Fact Sheet Issued By:

Illinois Environmental Protection Agency
Bureau of Water
Permit Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276
217/782-3362

Name and Address of Discharger: St. Andrews Properties, Inc. (Joel Hirsch) – 395 East Dundee Road, Suite 350, Wheeling, IL 60090

Discharge Location: Near Highland Park in NE 1/4 of Section 6 of Township 43N, Range 12E of the 3rd P.M. in Lake County.

Name of Receiving Water: Lake Michigan

Project Description: Proposed bluff stabilization and shoreline protection.

The Illinois Environmental Protection Agency (IEPA) has received an application for a Section 401 water quality certification to discharge into the waters of the state associated with a Section 404 permit application received by the U.S. Army Corps of Engineers. The Public Notice period will begin and end on the dates indicated in the heading of this Public Notice. The last day comments will be received will be on the Public Notice period ending date unless a commenter demonstrating the need for additional time requests an extension to this comment period and the request is granted by the IEPA. Interested persons are invited to submit written comments on the project to the IEPA at the above address. Commenters shall provide their names and addresses along with comments on the certification application. Commenters may include a request for public hearing. The certification and notice number(s) must appear on each comment page.

The attached Fact Sheet provides a description of the project and the antidegradation assessment.

The application, Public Notice/Fact Sheet, comments received, and other documents are available for inspection and may be copied at the IEPA at the address shown above between 9:30 a.m. and 3:30 p.m. Monday through Friday when scheduled by the interested person.

If written comments or requests indicate a significant degree of public interest in the certification application, the IEPA may, at its discretion, hold a public hearing. Public notice will be given 30 days before any public hearing. If a Section 401 water quality certification is issued, response to relevant comments will be provided at the time of the certification. For further information, please call Darren Gove at 217/782-3362.

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Fact Sheet for Antidegradation Assessment
For St. Andrews Properties, Inc.
IEPA Log No. C-0496-16
COE Log No. LRC-2016-00784
Contact: Brian Koch 217/558-2012
Public Notice Start Date: June 21, 2017

Joel Hirsch ("Applicant") has applied for a 401 Water Quality Certification for impacts associated with the construction of new stone and topsoil lake bluff stabilization project that includes armor-stone revetment along Lake Michigan in Section 6, Township 43 North, Range 12 East, Lake County, Illinois. The project site is located at 65 South Deere Park Drive in Highland Park. The proposed project would construct armor-stone revetment along Lake Michigan shoreline and a new bluff with maximum 2 horizontal:1 vertical slope consisting of compacted crushed stone. The new slope stone will be covered with topsoil and stabilized with vegetation. The stone revetment at the southern extent of the project will be integrated with an existing but damaged gabion and wall structure. At the northern end, the revetment will again tie in to existing rip rap currently stabilizing the mouth of a drainage ravine. The purpose of the project is to provide long-term bluff and shoreline protection. The proposed shoreline stabilization project is designed to reduce erosion and eliminate slope failure that is threatening the residential property. The proposed quarrystone protection structure would extend 290 feet along the toe of the bluff with varying widths between 21 and 45 feet. Construction of the proposed project may be conducted via land or barge. The proposed project will use approximately 1,810 cubic yards of clean quarried stone measuring 6" to 54" diameter for the slope stabilization fill and the armor-stone revetment. The project's fill activity below the ordinary high water mark (581.5' IGLD85) will result in the loss of approximately 0.25 acres of surface water in Lake Michigan.

Information used in this review was obtained from the Applicant in a document titled, Joint Application Form for Illinois received by the Agency on December 23, 2016 and from the plans document titled HIRSCH PLANS 05 31 2017_FINAL.pdf received on June 16, 2017.

Identification and Characterization of the Affected Water Body.

Lake Michigan has 0 cfs of flow during critical 7Q10 low-flow conditions. Lake Michigan is classified as a Lake Michigan Basin Use Water. Lake Michigan is not listed as a biologically significant stream in the 2008 Illinois Department of Natural Resources Publication *Integrating Multiple Taxa in a Biological Stream Rating System*, nor is it given an integrity rating in that document. Lake Michigan, Waterbody Segment, QLM-01, is listed on the draft 2016 Illinois Integrated Water Quality Report and Section 303(d) List as impaired for fish consumption use with potential causes given as mercury and polychlorinated biphenyls and aesthetic quality use with potential cause given as phosphorus. Aquatic life, public and food processing water supply, primary recreational contact, and secondary contact uses are fully supported. A Total Maximum Daily Load (TMDL) Report has been prepared and approved by the USEPA for 51 beaches along Illinois' Lake Michigan shoreline to address Primary Contact Use Recreation impairments due to excess bacteria. The proposed activity does not occur within an area identified by the report "Shoreline Segments in Lake County, Illinois" May 15, 2013 as a Beach Protection Area subject to that TMDL.

Identification of Proposed Pollutant Load Increases or Potential Impacts on Uses.

The pollutant load increases that would occur from this project include some possible increases in total suspended solids. These increases, a normal and unavoidable result of the placement of the crushed stone and quarrystone, may occur in the lake at the point of construction activity. Benthic habitat will also be disturbed near the construction area. The proposed activity would permanently fill 0.25 acres of Lake Michigan's lakebed area using clean fill material from inland quarries. Any lakebed material that is disturbed will be disturbed only by moving it aside and letting it remain in the lake. Impacts to the aquatic life uses of this area, or any other designated used, is not expected. Due to the heavily eroded conditions of the project area, the quarrystone structure will improve water quality by minimizing erosion and may provide a more diverse aquatic habitat compared to the existing heavily eroded conditions.

Fate and Effect of Parameters Proposed for Increased Loading.

The increase in suspended solids from the construction of the quarry stone bluff toe protection will be local and temporary. Loss of existing uses resulting from the permanent fills will be mitigated by the purchase of wetland mitigation credits. The applicant has proposed the purchase of 0.75 acres of wetland mitigation bank credits from the out of watershed Atkinson Road Wetland Mitigation Bank at a ratio of 3:1 to offset the 0.25 acres filled by placement of the quarried stone. Lakebed downcutting has resulted in the loss of sand in this section of the coastline. Although the benthic habitat will be disturbed by the construction activities, it is anticipated to recover and improve over time due to the addition of stable quarry stone that will enhance the diversity of the aquatic habitat. The upland portions of this project will be stabilized with interlocking crushed stone and covered with topsoil. The topsoil will be temporarily stabilized and seeded with deep rooting vegetation to provide long term vegetated stabilization of the slope. These improvements are expected to improve the water quality by eliminating bluff erosion at this property.

Purpose and Social & Economic Benefits of the Proposed Activity.

The proposed shoreline protection structure will stabilize a currently failing bluff that is threatening the safety of a residential structure located at the top of the bluff. Continued erosion of the bluff would result in increased damage to the residential structure and potential loss due to collapse. The proposed quarrystone structure will improve safety by preventing further slope failure and improve water quality by creating a stable shoreline with vegetated bluff habitat. The quarrystone structure may also provide a more diverse aquatic habitat compared to the existing heavily eroded conditions.

Assessments of Alternatives for Less Increase in Loading or Minimal Environmental Degradation.

Several options for shoreline stabilization were developed using coastal engineering design analysis, wave refraction diagrams, site surveys from 2010 and 2016, and bathymetric survey

near the site to document the deteriorating shoreline conditions at the site. Five design options were considered for the proposed project.

Option 1:
No Action:

- Slopes will continue to become steeper due to wave action.
- Slopes will continue to fail and progress landward.
- Existing stone revetment will continue to deteriorate.
- Structural damage to residence is imminent.

Option 2:
Excavate the Slope to Stable Slope Angle without Fill in Lake Michigan:

- Requires regrading of the slope to a 2H:1V slope or flatter.
- Would not reduce wave attack.
- Would require relocation of the residence 50 feet or more landward.
- Reconstruction in-kind not possible due to land constraint reducing property value.

Option 3:
Beach Creation only:

- Provides protection of the bluff.
- Does not address the instability of the eroding slope.
- Would require minor revetment toe.
- Not a cost-effective approach.

Option 4:
Vertical Wall Slope Stabilization

- Constructability is challenging given site conditions.
- Would require extensive tie-back system.
- Requires revetment fill at toe of wall to protect from wave attack.

Option 5: **Preferred option**
Place Fill to Create a Stable Slope and Construct Armor Stone Toe Protection

- Restores slope to 2H:1V with stone fill.
- Armor stone revetment placed at toe of slope to protect slope from wave attack.
- Stone on new slope will be covered with topsoil, erosion mat and vegetation.
- Most cost effective.

Summary Comments of the Illinois Department of Natural Resources, Regional Planning Commissions, Zoning Boards or Other Entities.

An EcoCAT endangered species consultation submitted on February 8, 2017 to the Illinois Department of Natural Resources resulted in identification of the Ravinia Bluff INAI Site and Ground Juniper (*Juniperis communis*) in vicinity of the proposed activity. Further review by the

IDNR resulted in their determination that adverse impacts are unlikely. Consultation for IDNR Project # 1706989 (1707568) was terminated on June 16, 2017.

Agency Conclusion.

This preliminary assessment was conducted pursuant to the Illinois Pollution Control Board regulation for Antidegradation found at 35 Ill. Adm. Code 302.105 (antidegradation standard) and was based on the information available to the Agency at the time this assessment was written. We tentatively find that the proposed activity will result in the attainment of water quality standards and TMDL load allocations; that all technically and economically reasonable measures to avoid or minimize the extent of the proposed increase in pollutant loading have been incorporated into the proposed activity; and that this activity will benefit the Lake Michigan shoreline by providing a stabilized shoreline that reduces erosion of the bluff and lakebed, prevents the destabilization of the bluff toe which could lead to the loss of land and infrastructure, and provides additional diverse aquatic habitat. Comments received during the 401 Water Quality Certification public notice period will be evaluated before a final decision is made by the Agency.